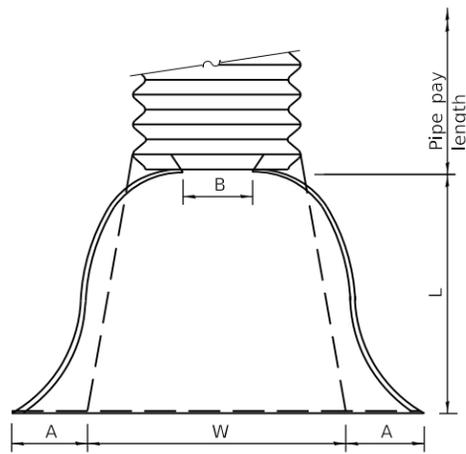
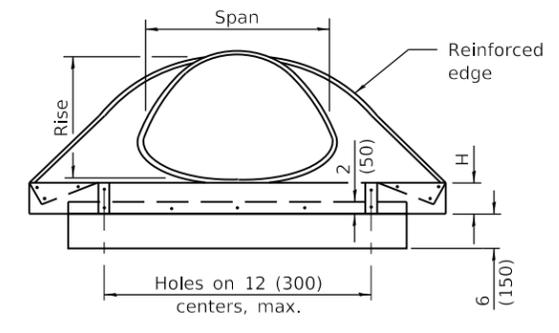


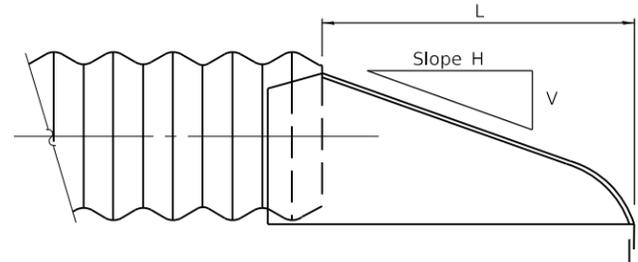
PIPE ARCH DIMENSIONS		THICKNESS	DIMENSIONS					SLOPE (Approx.) (V:H)	BODY
SPAN	RISE		A	B	H	L	W		
			1± (25)	(max.)	1± (25)	1½± (38)	2± (50)		
17 (432)	13 (330)	0.064 (1.63)	7 (180)	9 (230)	6 (150)	19 (485)	30 (760)	1:2½	1 Pc.
21 (533)	15 (381)	0.064 (1.63)	7 (180)	10 (255)	6 (150)	23 (585)	36 (915)	1:2½	1 Pc.
24 (610)	18 (457)	0.064 (1.63)	8 (205)	12 (305)	6 (150)	28 (710)	42 (1,065 m)	1:2½	1 Pc.
28 (711)	20 (508)	0.079 (2.01)	9 (230)	14 (355)	6 (150)	32 (815)	48 (1,220 m)	1:2½	1 Pc.
35 (889)	24 (610)	0.079 (2.01)	10 (255)	16 (405)	6 (150)	39 (990)	60 (1,525 m)	1:2½	1 Pc.
42 (1067)	29 (737)	0.079 (2.01)	12 (305)	18 (460)	8 (205)	53 (1,170 m)	75 (1,905 m)	1:2½	1 Pc.
49 (1245)	33 (838)	0.109 (2.77)	13 (330)	21 (535)	9 (230)	46 (1,170 m)	85 (2,160 m)	1:2½	2 Pc.
57 (1448)	38 (965)	0.109 (2.77)	18 (460)	26 (660)	12 (305)	63 (1,600 m)	90 (2,285 m)	1:2½	2 Pc.
64 (1626)	43 (1092)	0.109 (2.77)	18 (460)	30 (760)	12 (305)	70 (1,780 m)	102 (2,590 m)	1:2¼	2 Pc.
71 (1803)	47 (1194)	0.138 (3.51)	18 (460)	33 (840)	12 (305)	77 (1,955 m)	114 (2,895 m)	1:2¼	3 Pc.
77 (1956)	52 (1321)	0.168 (4.27)	18 (460)	36 (915)	12 (305)	77 (1,955 m)	126 (3,200 m)	1:2	3 Pc.
83 (2108)	57 (1448)	0.168 (4.27)	18 (460)	39 (990)	12 (305)	77 (1,955 m)	138 (3,505 m)	1:2	3 Pc.



PLAN



END VIEW



SIDE VIEW

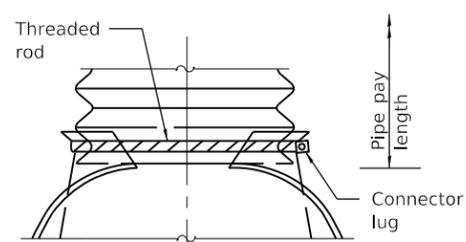
END SECTION

NOTES

For the 77x52 (1956x1321) and 83x57 (2108x1448) sizes, reinforced edges shall be supplemented with 2x2x¼ (51x51x6.4) stiffener angles. The angles shall be attached by ⅜ (M10) rivets or bolts.

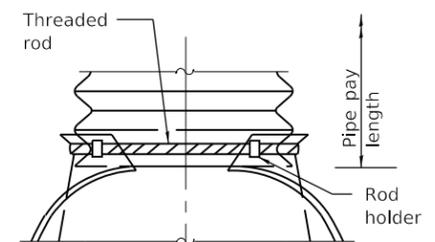
Angle reinforcement shall be placed under the center panel seams on the 77x52 (1956x1321) and 83x57 (2108x1448) sizes.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).



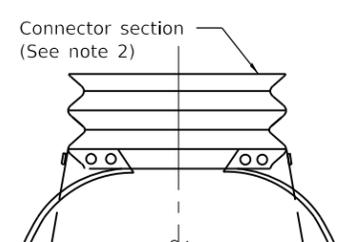
TYPE 1

For 17x13 (432x330) thru 28x20 (711x508) only (See Note 1)



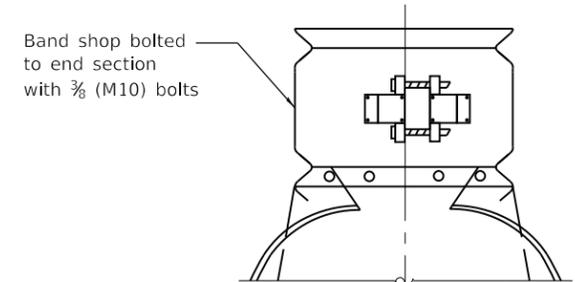
TYPE 2

For 17x13 (432x330) thru 57x38 (1448x965) only (See Note 1)



TYPE 3

(See Note 2)



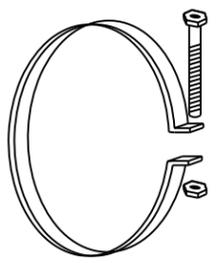
TYPE 4

(See Note 3)

NOTES

- Type 1 and 2 connection shall be used only with pipes with annular ends.
- Type 3 connection can be used with all pipe arch sizes and includes 12 (300) of the pipe length. The annular connector section shall be attached to the end section by rivets or bolts and shall be the same metal thickness as the end section. When coupling the type 3 end section to a pipe with helical ends, only the dimple type coupling band shall be used.
- Type 4 connection can be used with all pipe arch sizes. The end section band shall be either a dimple, hugger, or annular band and can be used with pipes having annular ends. For pipes having helical ends, only the dimple end section band will be allowed.

All dimensions are in inches (millimeters) unless otherwise shown.



ALTERNATE STRAP CONNECTOR

(For Type 1 only)

1 (25) wide, 0.109 (2.77) thick strap with standard ½x6 (M12x150) band bolt and nut.

CONNECTIONS OF END SECTIONS

DATE	REVISIONS
1-1-18	Renamed standard.
4-1-16	Revised THICKNESS values in table.

METAL FLARED END SECTIONS FOR PIPE ARCHES

STANDARD 542406-03

Illinois Department of Transportation

PASSED January 1, 2018
Michael Beard
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2018
Maureen M. Beck
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97